

1 AMENDMENTS TO THE SPECIFICATION

Please replace the first paragraph in the summary of the invention (p 6 lines 2-14) with the following paragraph.

The present invention describes a motionless wide range multi-beam optical beam steering device and the methods for manufacturing the said beam steering device. Such device is also termed as optical "Transmitter" thereafter in the application. Furthermore, if an optical receiver is integrated, it is also termed as "Transceiver". The centerpiece of this transmitter is a planar wave guide based wave guide digital steering device (termed as "planar wave guide beam steering device (WG-BSD)" thereafter) that employs wave guide switching element for deflecting light beam. Similar to the prior-art planar waveguide switch employing liquid crystal as the switching elements as disclosed by John Thackara ("Planar Waveguide Switch and Optical Cross-Connect, WO 02/31558, International Publication Date: 18 April, 2002), one of the preferred configurations of the WG-BSD in the present invention steers efficiently randomly polarized beam of light. However, the steering operation is realized electrically by changing the liquid crystal refractive index via electric means rather than thermal means. In an alternative design, this WG-BSD is capable of efficiently steering a polarized beam of light by electric means. The preferred configurations of the WG-BSD in the present invention steer efficiently light of any polarization, here defined any one of unpolarized (randomly polarized), or each of both polarizations of polarized of light. One of skill in the art understands that an unpolarized or randomly polarized light beam may be formed by a combination of two light beams having one of two polarizations, generally two linearly polarized light beams (denoted "s" and "p" polarization) or circularly polarized light beams (right and left handed polarizations). These polarizations are generally denoted by "both polarizations".

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